

REMARKS

With the entry of this Amendment, Claims 1-9, 12-20, 23-38 and 40-44 are pending in this application. Claims 1, 12, 14, 23, 25, 30-33, 35, 38 and 40-43 have been amended, and Claims 10, 11, 21, 22, 26-29, 37 and 39 have been cancelled.

Independent Claim 1 has been amended to include the limitations that “the inner portion [of the tip is] formed of a first material having sufficient flexibility to allow the inner portion to navigate the S-shaped path of an ear canal while maintaining sufficient stability to prevent the bore from collapsing when the tip is inserted into an ear canal,” and that the “mushroom shaped portion [is] integral with the inner portion, and extend[s] radially from the proximal end of the inner portion, [and] creates a seal in the bony portion of an ear canal when the tip is inserted into an ear, the mushroom shaped portion being formed of a second material, the second material having a greater compliance than the first material.” Similar amendments have been made to independent Claims 12 and 23. Support for these amendments can be found in the Specification at, for example, page 7, line 16 through page 8, line 3.

Independent Claim 25 has been amended to incorporate the limitations of dependent Claim 29, and Claims 26-28 have been cancelled. Independent Claim 35 has been amended to incorporate the limitations of dependent Claim 39, and Claims 37 and 39 have been cancelled. Claims 30-33, 38 and 40-43 have been revised to change their claim dependencies.

Claim 14 has been amended to correct the formal error in claim language noted by the Examiner. No new matter has been added by way of these amendments.

The present invention relates in one aspect to a flexible tip for a hearing aid comprising an integral tip having inner portion made from a first material, and a mushroom-shaped portion made from a second material. The inner portion includes a bore and a housing for the hearing aid receiver. The inner portion is made from a first material that is sufficiently flexible to bend through S-curves, but rigid enough to prevent collapse of the bore. The mushroom-shaped portion is made from a second, lower durometer material (compared to the first material), and thus provides improved comfort to the wearer, even when located in a bony region of the ear canal, while producing a sufficient acoustic seal within the ear canal. The user is thus able to get the best of both worlds: a deep fitting receiver which improves sound quality and reduces power

requirements for the hearing aid, and a device that is comfortable to the wearer, even when it is placed in the sensitive bony region of the ear canal.

The presently claimed tip, as is recited in Claims 1-9, 12-20 and 23-24, is patentably distinguishable from the references cited in the Office Action: U.S. 6,473,513 to Shennib *et al.* ("Shennib '513"), and U.S. 5,701,348 to Shennib *et al.* ("Shennib '348").

For example, the Shennib '348 does not have a hearing aid tip having an "inner portion" and a "mushroom shaped portion" that is integral with the inner portion. According to the present claims, the "inner portion" defines a bore having a proximal end and a distal end, the proximal end of the bore being adapted to be disposed adjacent an eardrum, and a housing formed in the bore that contains a receiver, and in which the inner portion is formed of a first material having sufficient flexibility to allow the inner portion to navigate the S-shaped path of an ear canal while maintaining sufficient stability to prevent the bore from collapsing when the tip is inserted into an ear canal. In addition, the "mushroom shaped portion" extends radially from the proximal end of the inner portion, and creates a seal in the bony portion of an ear canal when the tip is inserted into an ear, the mushroom shaped portion being formed of a second material, the second material having a greater compliance than the first material.

In the Office Action, the Examiner asserts that the "sealing retainer 80" shown in Figs. 5-7, 13 and 18 constitutes the presently-claimed "flexible tip." However, the present amendment to the claims forecloses this argument, since the "sealing retainer 80" cannot be both the "inner portion" and the integral "mushroom shaped portion" of the tip, as those features are defined in the present claims. In fact, Shennib teaches a vastly different arrangement for a hearing aid tip, in which the receiver 70 is mechanically connected to the hearing aid base by a flexible connector 79, and a sealing retainer 80 slips over the receiver 70. For instance, Shennib does not teach or suggest a tip having a first inner portion, made from a first material, and a second, mushroom shaped portion, integral with the inner portion and made with a second, more compliant material.

Nor is the presently-claimed tip taught or suggested in the Shennib '348 reference. The Shennib '348 patent discusses a hearing aid having highly-articulated non-contiguous parts. All the embodiments of Shennib '348 include a device having a main module 12, a receiver module 40, and a connector 50 to separate the receiver from the main module and allow the receiver to

articulate with respect to the main module. The receiver module 40 includes a receiver 41, a rigid housing 42 and an external housing made of soft material 43. (See col. 7, line 60 through col. 8, line 30). In certain alternative embodiments, the module can have a sealing bulbous tip 70 (see Fig. 11), or it can have a sleeve seal 190 (Fig. 18) or another separable sealing part (see col. 9, lines 17-65). However, Shennib '348 does not teach or suggest a flexible hearing aid tip having "an inner portion defining a bore having a proximal end and a distal end, the proximal end of the bore adapted to be disposed adjacent an eardrum and a housing formed in the tip at the bore, the inner portion formed of a first material having sufficient flexibility to allow the inner portion to navigate the S-shaped path of an ear canal while maintaining sufficient stability to prevent the bore from collapsing when the tip is inserted into an ear canal," and a "mushroom shaped portion, integral with the inner portion, and extending radially from the proximal end of the inner portion, which creates a seal in the bony portion of an ear canal when the tip is inserted into an ear, the mushroom shaped portion being formed of a second material, the second material having a greater compliance than the first material."

Accordingly, it is believed that independent Claims 1, 12 and 23, as well as their dependents, Claims 2-9, 13-20 and 24, are all allowable.

Turning now to independent Claims 25 and 35, these claims have been amended to incorporate the limitations of dependent Claims 29 and 39, respectively, and now recite, *inter alia*, a flexible tip having an inner portion defining a bore having a proximal end and a distal end, the inner portion formed of a flexible material adapted to conform to the geometry of an ear canal and the proximal end of the bore adapted to be disposed adjacent an eardrum, and a receiver housing and a spring assembly being integrally formed with the bore of the flexible tip, with a receiver being mounted within the receiver housing.

It is respectfully submitted that the Examiner has not made a *prima facie* showing of obviousness or anticipation with respect to amended Claims 25 and 35, since neither of the cited references, Shennib '513 or Shennib '348, teach or suggest the limitation of "a spring assembly" that is "integrally formed with the bore," where the "bore" is defined by the "inner portion" of the tip. In the Office Action, the Examiner cites the "connector 79" of Shennib '513 as meeting the "spring assembly" limitation. However, the connector 79 of Shennib cannot be the present

“spring assembly,” since it is not even part of the hearing aid tip, and is certainly not “integrally formed with” the bore defined by an inner portion of a flexible hearing aid tip.

With respect to the Shennib ‘348 reference, the Examiner does not identify any specific component of this reference as corresponding to the claimed spring assembly, but does assert that such an assembly is shown in Figs. 3-5, 10-11 and 28. Applicants fail to see where the presently recited spring assembly is disclosed in the Shennib ‘348 patent. Fig. 28 of Shennib ‘348, for instance, shows the connector 50 which allows the receiver module to articulate with respect to the main module. The connector is not part of the hearing aid tip, and is not “integrally formed with” the bore defined by an inner portion of a flexible hearing aid tip.

Accordingly, it is believed that Claims 25, 30-36, 38 and 40-44 are allowable.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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